

CLAIMS:

1. A conveying apparatus for conveying a work,
comprising:

5 a three-phase synchronous motor which is electrically
connected to a three-phase AC power supply and is driven to
output power by a three-phase AC voltage output from said
three-phase AC power supply; and

10 a conveyor body which is operationally coupled to said
three-phase synchronous motor and operates to convey said work
with said power output from said three-phase synchronous
motor.

2. The conveying apparatus according to claim 1, wherein
15 said three-phase synchronous motor has a stator including a
plurality of teeth laid at predetermined equiangular
distances, a first excitation coil, a second excitation coil,
and a third excitation coil; wherein each of said teeth has
wound around it one of the first to third excitation coils;
20 wherein each of a group of those teeth around which said first
excitation coil is wound, each of a group of those teeth
around which said second excitation coil is wound, and each of
a group of those teeth around which said third excitation coil
is wound are laid out with two of said teeth of other groups
25 placed in between adjoining teeth of said each group; and
wherein one of three single-phase AC voltages included in said
three-phase AC voltage is supplied to each of said first to
third excitation coils.

30 3. The conveying apparatus according to claim 2, wherein
said first to third excitation coils are connected to one
another by a delta connection.

4. The conveying apparatus according to claim 2, wherein
35 a number of said teeth is a natural multiple of 3.

5. The conveying apparatus according to claim 1, wherein
said three-phase synchronous motor is one of a plurality of
three-phase synchronous motors, and said conveyor body is one
5 of a plurality of feed rollers to which said three-phase
synchronous motors are respectively coupled operationally.

6. The conveying apparatus according to claim 1, wherein
said three-phase synchronous motor is one of a plurality of
10 three-phase synchronous motors, and said conveyor body
comprises a plurality of feed rollers, wherein some of the
feed rollers are respectively coupled operationally to said
three-phase synchronous motors, and wherein the rest of the
feed rollers are not coupled to any three-phase synchronous
15 motor.

7. The conveying apparatus according to claim 1, wherein
said conveyor body comprises a plurality of feed rollers and
said power to be output from said three-phase synchronous
20 motor is supplied to at least two of said feed rollers.